FIG. 1

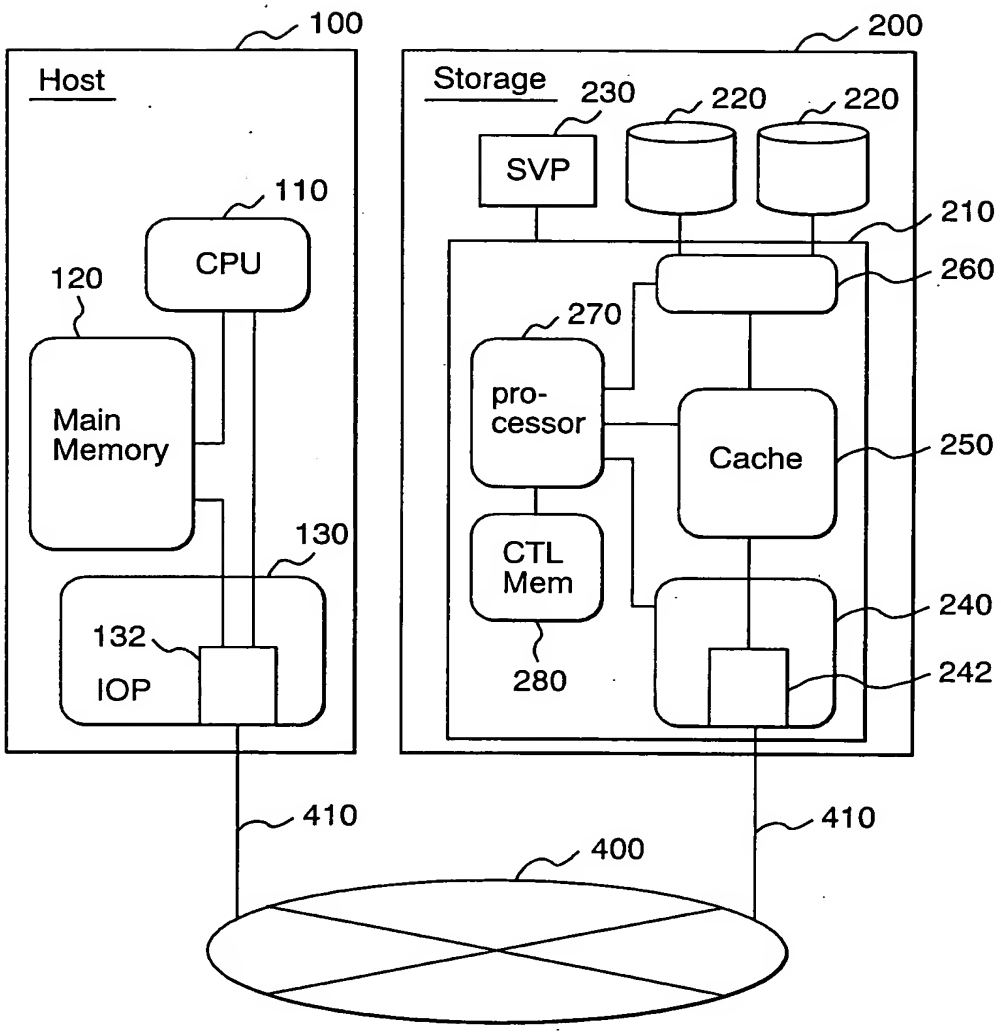

100
Host
110
CPU
120
Main Memory
130
132
IOP
200
Storage
230
SVP
220
220
210
260
270
pro-cessor
Cache
250
CTL Mem
280
240
242
410
410
400

FIG. 2

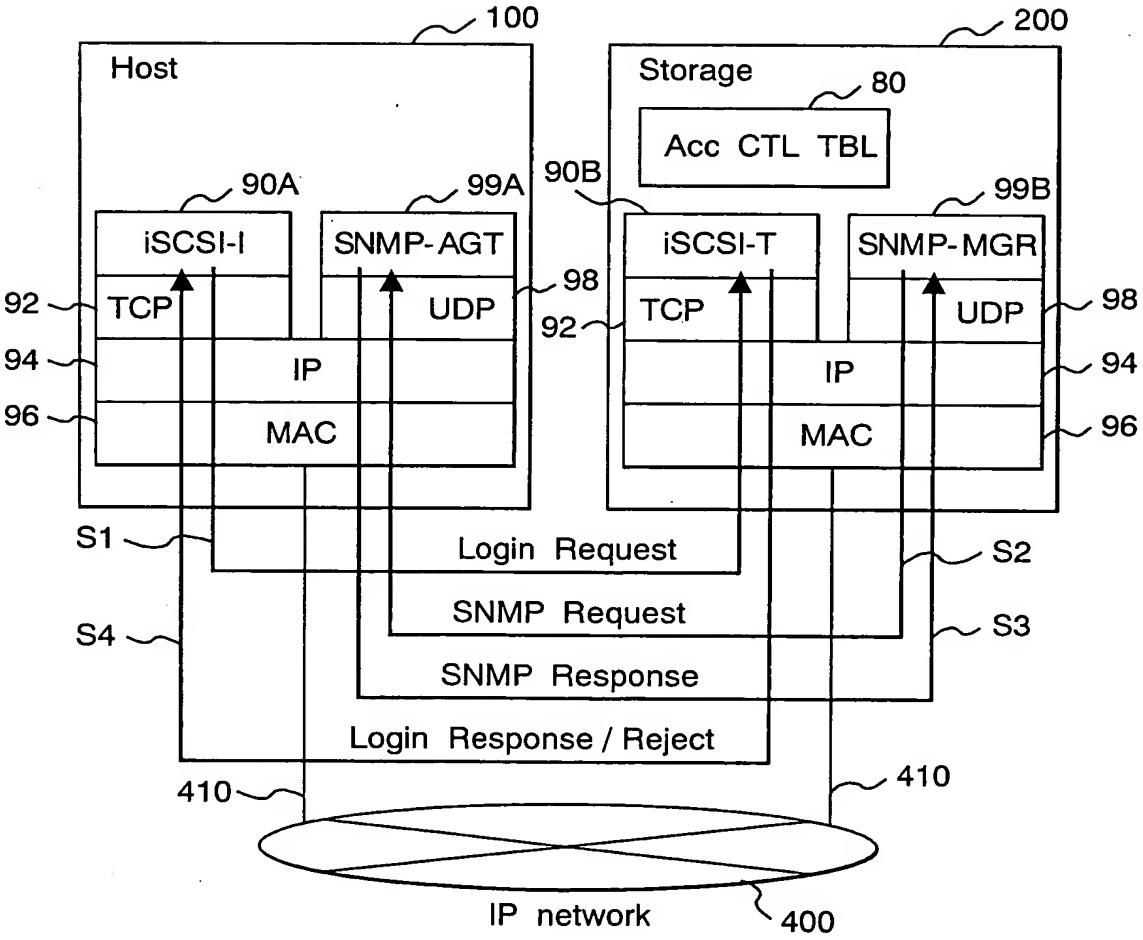
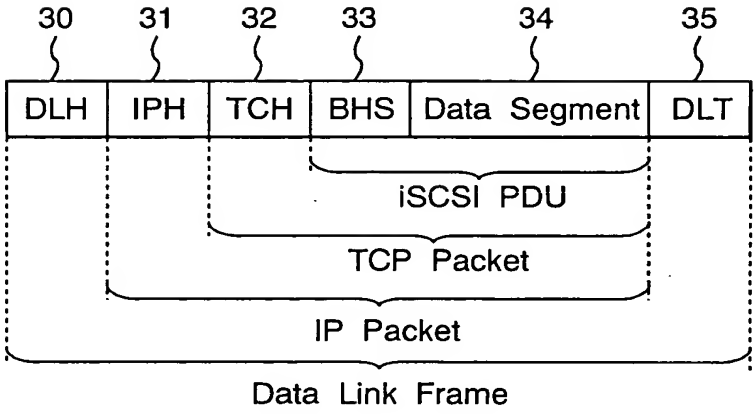

100
Host
200
Storage
80
Acc CTL TBL
90A
99A
90B
99B
iSCSI-I
SNMP-AGT
iSCSI-T
SNMP-MGR
92
TCP
UDP
98
94
IP
96
MAC
S1
Login Request
S2
SNMP Request
S4
S3
SNMP Response
Login Response / Reject
410
410
IP network
400

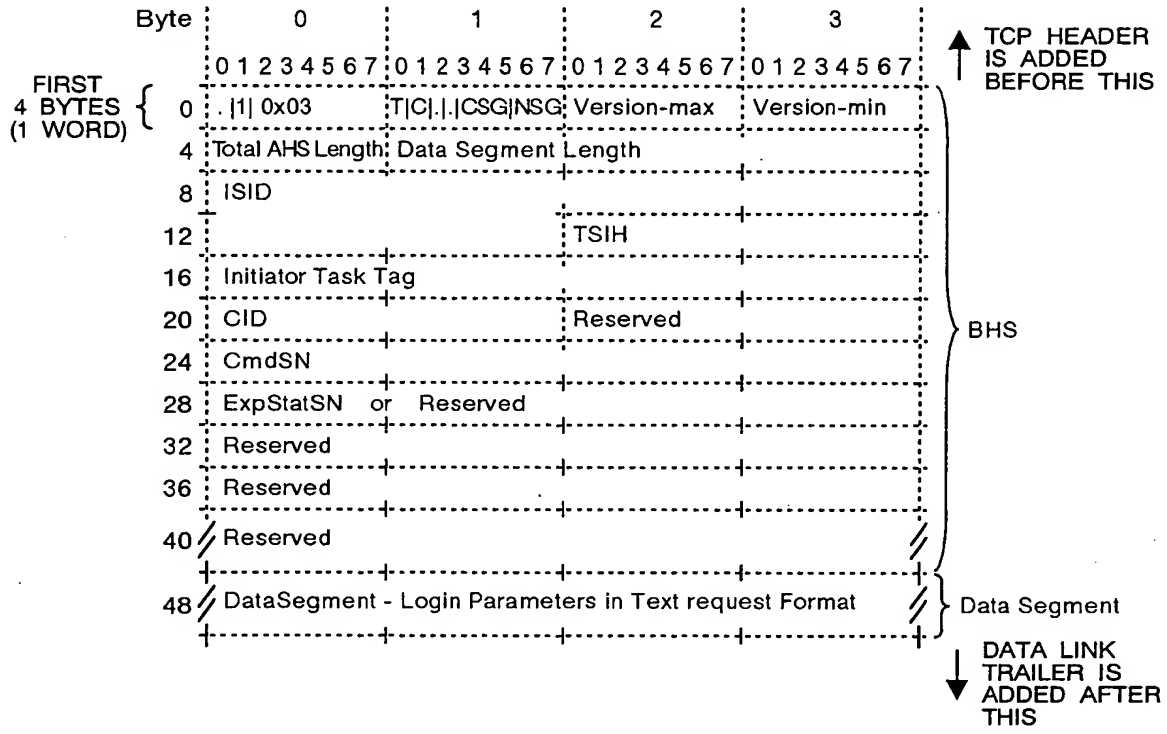
FIG. 3



DLH : Data Link Header
IPH : IP Header
TCH : TCP Header
BHS : Basic Header Segment
DLT : Data Link Trailer

FIG. 4

(A) Login Request



(B) Login Response

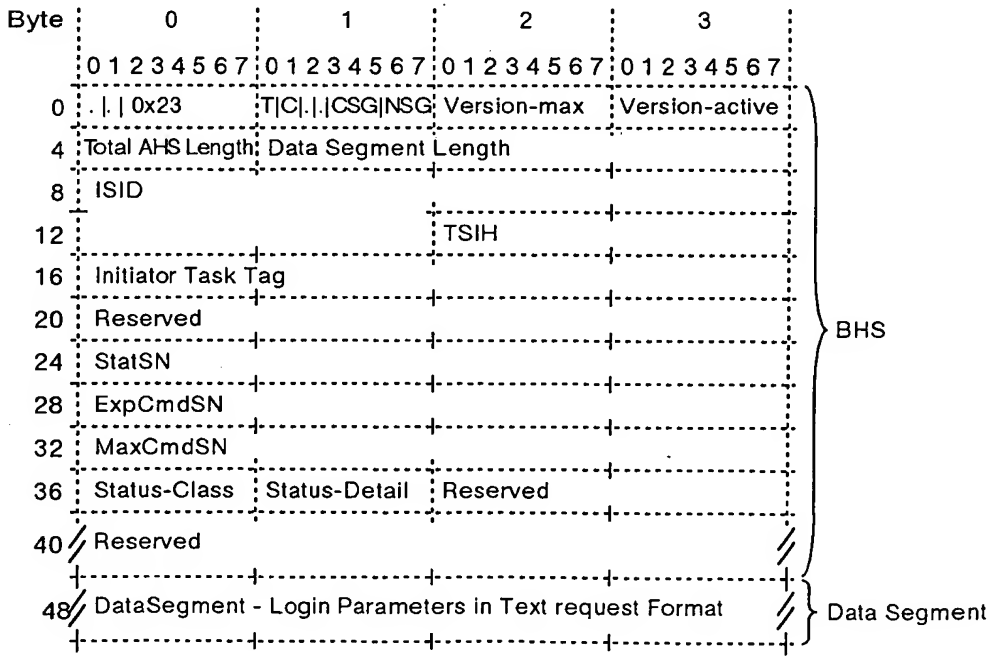


FIG. 5

81 MAC Address	82 IP Address	83 LU	84 Session
MA0	IPA0	LUNO	establish
MA1	IPA1	LUN1, LUN2	login
MA2	nil	LUN2	Not establish

80

FIG. 6

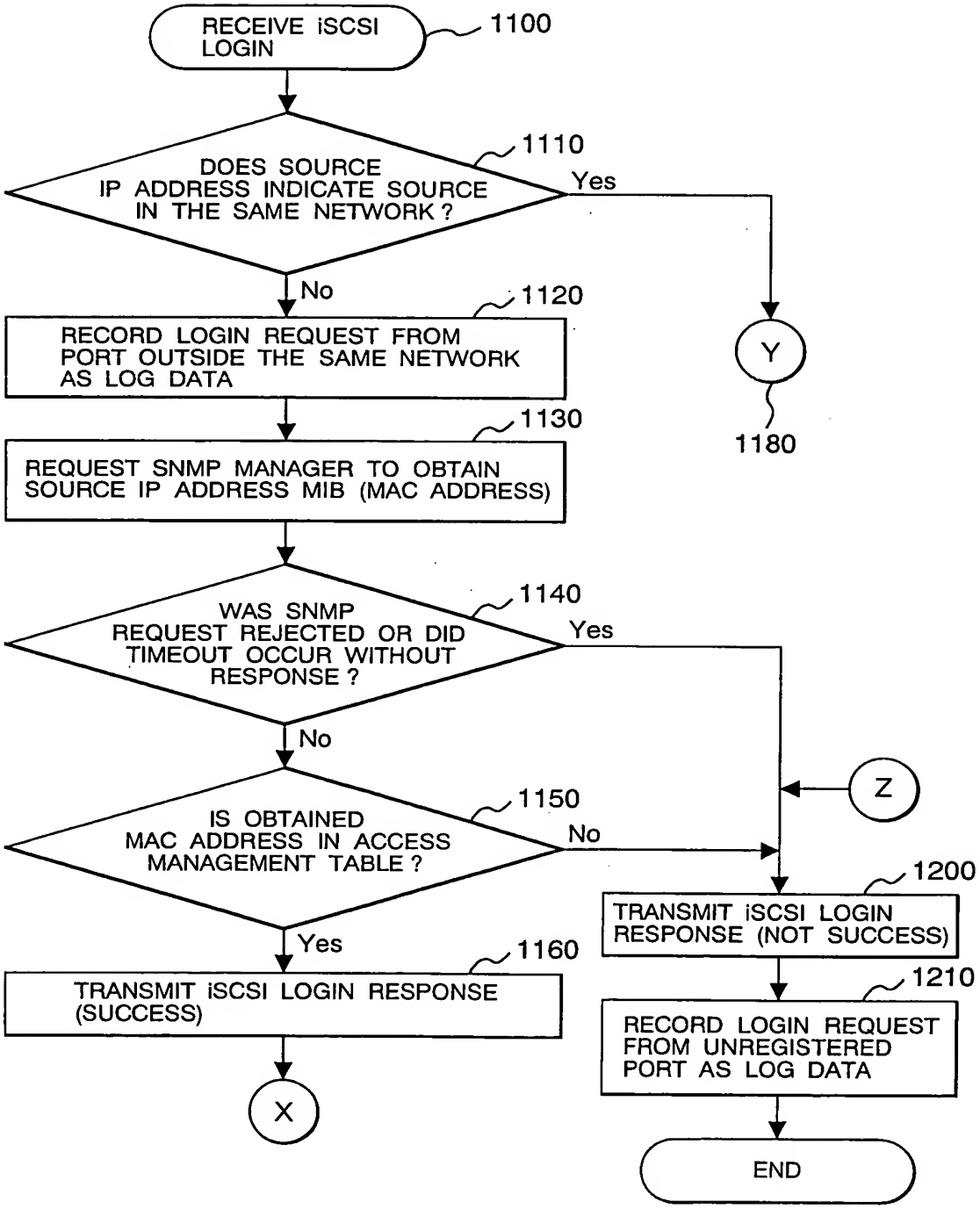

RECEIVE iSCSI LOGIN
1100
DOES SOURCE IP ADDRESS INDICATE SOURCE IN THE SAME NETWORK ?
1110
Yes
No
RECORD LOGIN REQUEST FROM PORT OUTSIDE THE SAME NETWORK AS LOG DATA
1120
Y
1180
REQUEST SNMP MANAGER TO OBTAIN SOURCE IP ADDRESS MIB (MAC ADDRESS)
1130
WAS SNMP REQUEST REJECTED OR DID TIMEOUT OCCUR WITHOUT RESPONSE ?
1140
Yes
No
Z
IS OBTAINED MAC ADDRESS IN ACCESS MANAGEMENT TABLE ?
1150
No
Yes
TRANSMIT iSCSI LOGIN RESPONSE (SUCCESS)
1160
X
TRANSMIT iSCSI LOGIN RESPONSE (NOT SUCCESS)
1200
RECORD LOGIN REQUEST FROM UNREGISTERED PORT AS LOG DATA
1210
END

FIG. 7

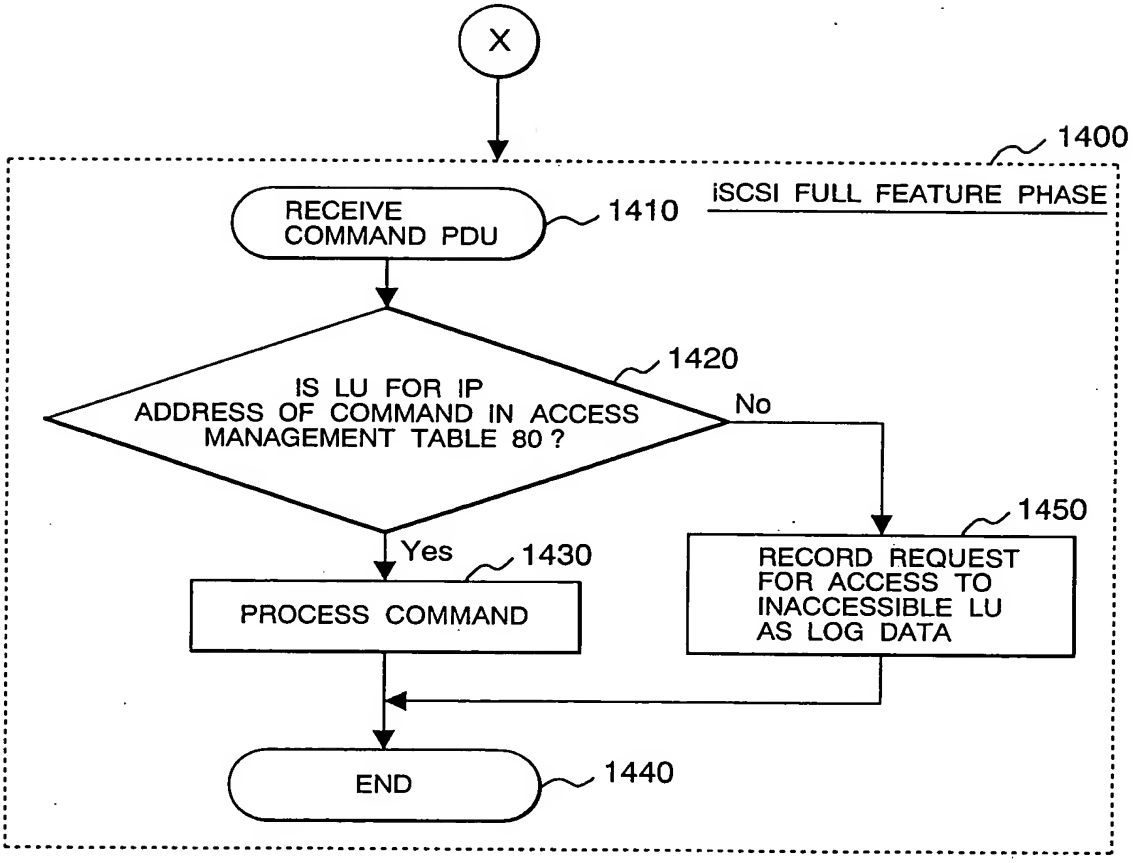

X
1400
iSCSI FULL FEATURE PHASE
RECEIVE COMMAND PDU
1410
IS LU FOR IP ADDRESS OF COMMAND IN ACCESS MANAGEMENT TABLE 80 ?
1420
No
Yes
1430
PROCESS COMMAND
1450
RECORD REQUEST FOR ACCESS TO INACCESSIBLE LU AS LOG DATA
END
1440

FIG. 8

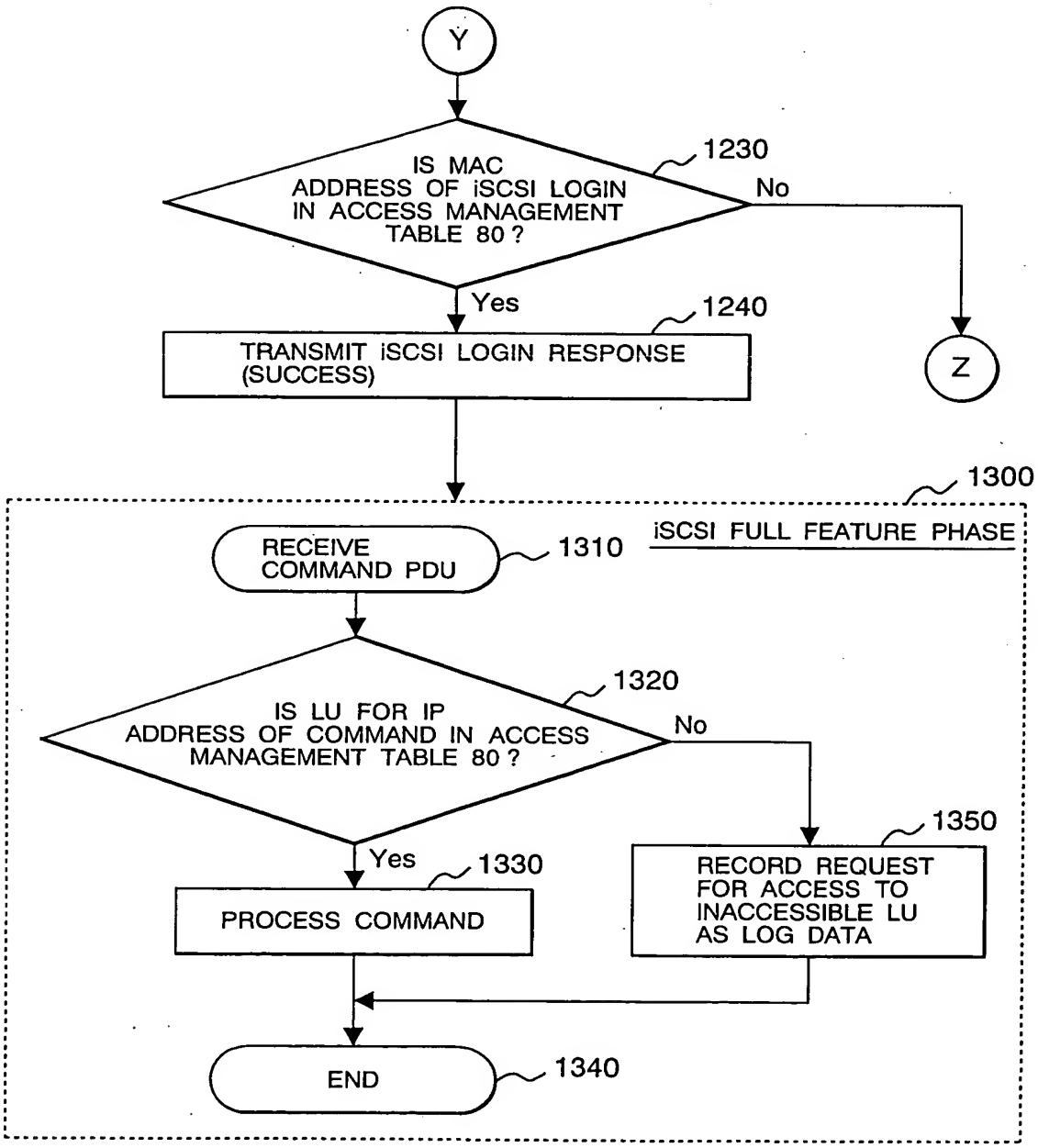

Y
IS MAC ADDRESS OF iSCSI LOGIN IN ACCESS MANAGEMENT TABLE 80 ?
1230
No
Yes
1240
TRANSMIT iSCSI LOGIN RESPONSE (SUCCESS)
Z
1300
iSCSI FULL FEATURE PHASE
RECEIVE COMMAND PDU
1310
IS LU FOR IP ADDRESS OF COMMAND IN ACCESS MANAGEMENT TABLE 80 ?
1320
No
Yes
1330
PROCESS COMMAND
1350
RECORD REQUEST FOR ACCESS TO INACCESSIBLE LU AS LOG DATA
END
1340

FIG. 9

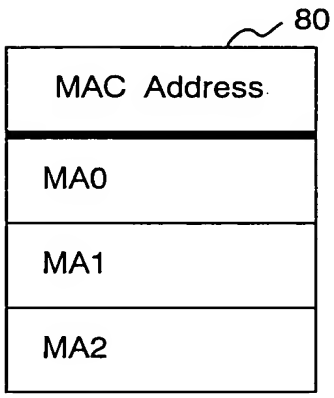
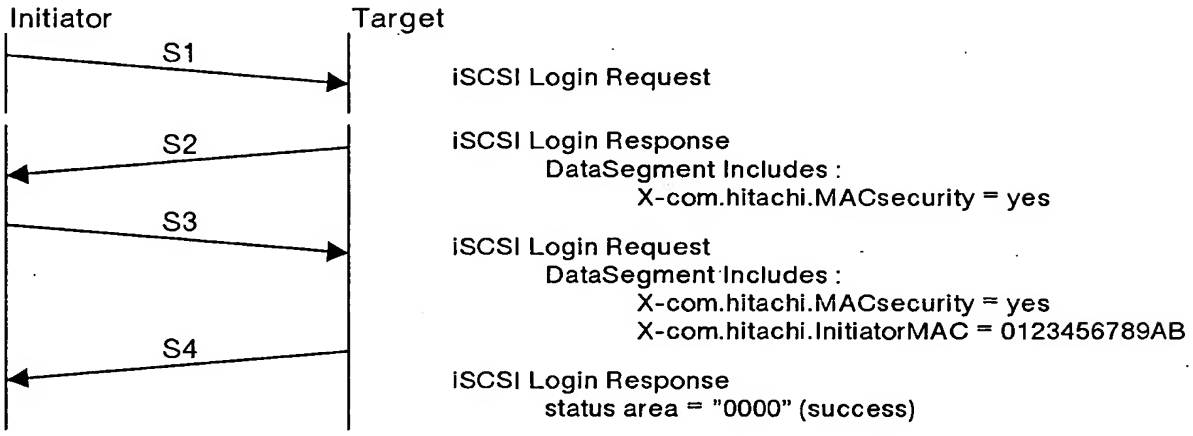
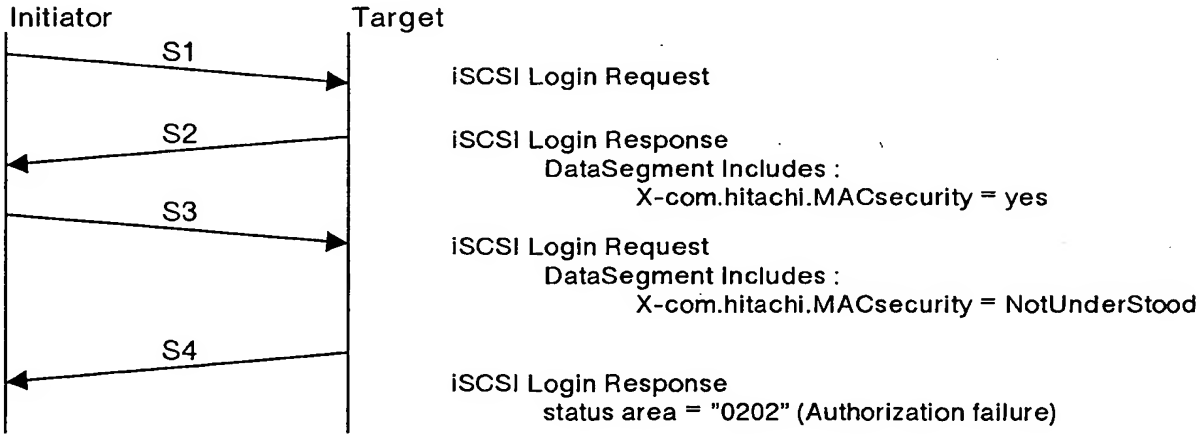


FIG. 10

(A) SUCCESSFUL LOGIN



(B) UNSUCCESSFUL LOGIN